

# Red and Purple Modernization

## Welcome to the Red-Purple Bypass Public Hearing

### **The purpose of this meeting is to:**

- Share information on the Red-Purple Bypass Project
- Summarize results of the recently completed Environmental Assessment
- Obtain your input on the impacts and proposed mitigation measures

*If you have questions, feel free to ask the representatives stationed around the boards.*

### **Formal comments can be made in two ways:**

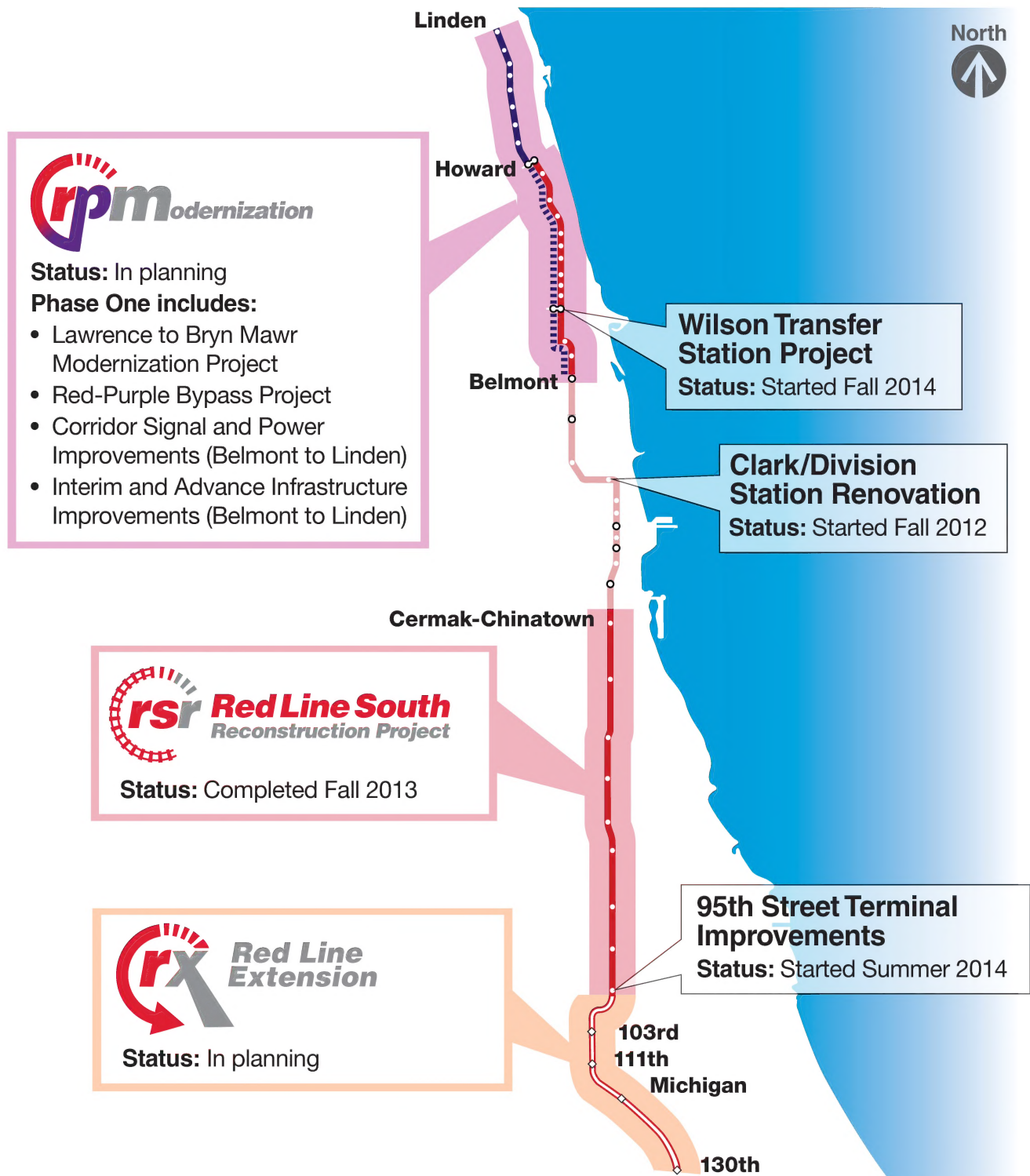
- Speak with the court reporter
- Provide written comments on comment cards

### **Written comments will also be taken through June 18, 2015:**

- **By email:** [RedPurpleBypass@transitchicago.com](mailto:RedPurpleBypass@transitchicago.com)
- **By mail:** Chicago Transit Authority  
Strategic Planning, 10th Floor  
Attn: Red-Purple Bypass Project  
567 W. Lake Street, Chicago, IL 60661

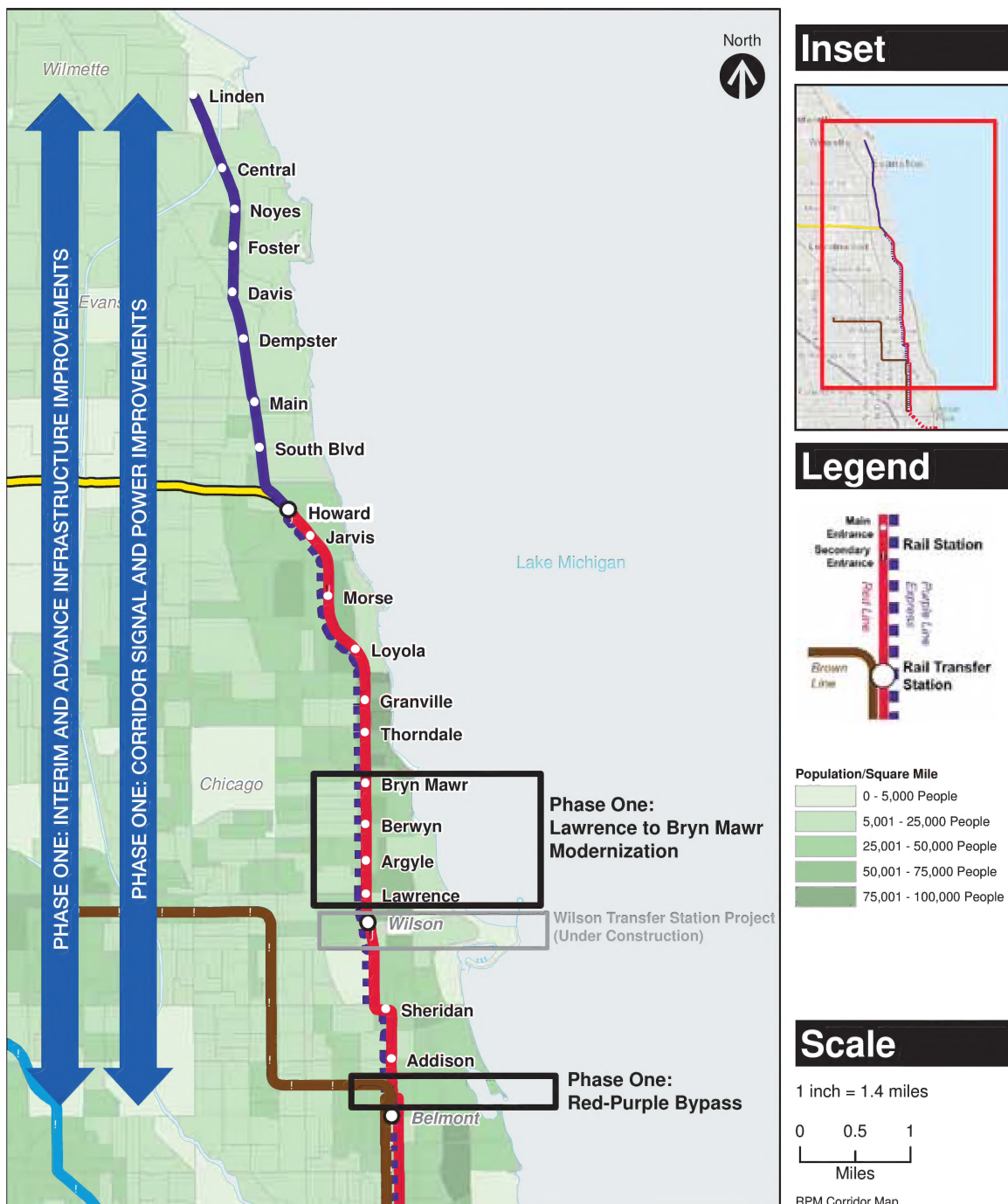
## The Red Ahead Program

**Red Ahead is a comprehensive initiative for maintaining, modernizing, and expanding Chicago's most traveled rail line.**



## Red and Purple Modernization Program

**RPM is proposed as a massive, multistaged program to be completed in phases, allowing CTA to make the greatest number of improvements while meeting the public's expectations for timely delivery of the improvements.**





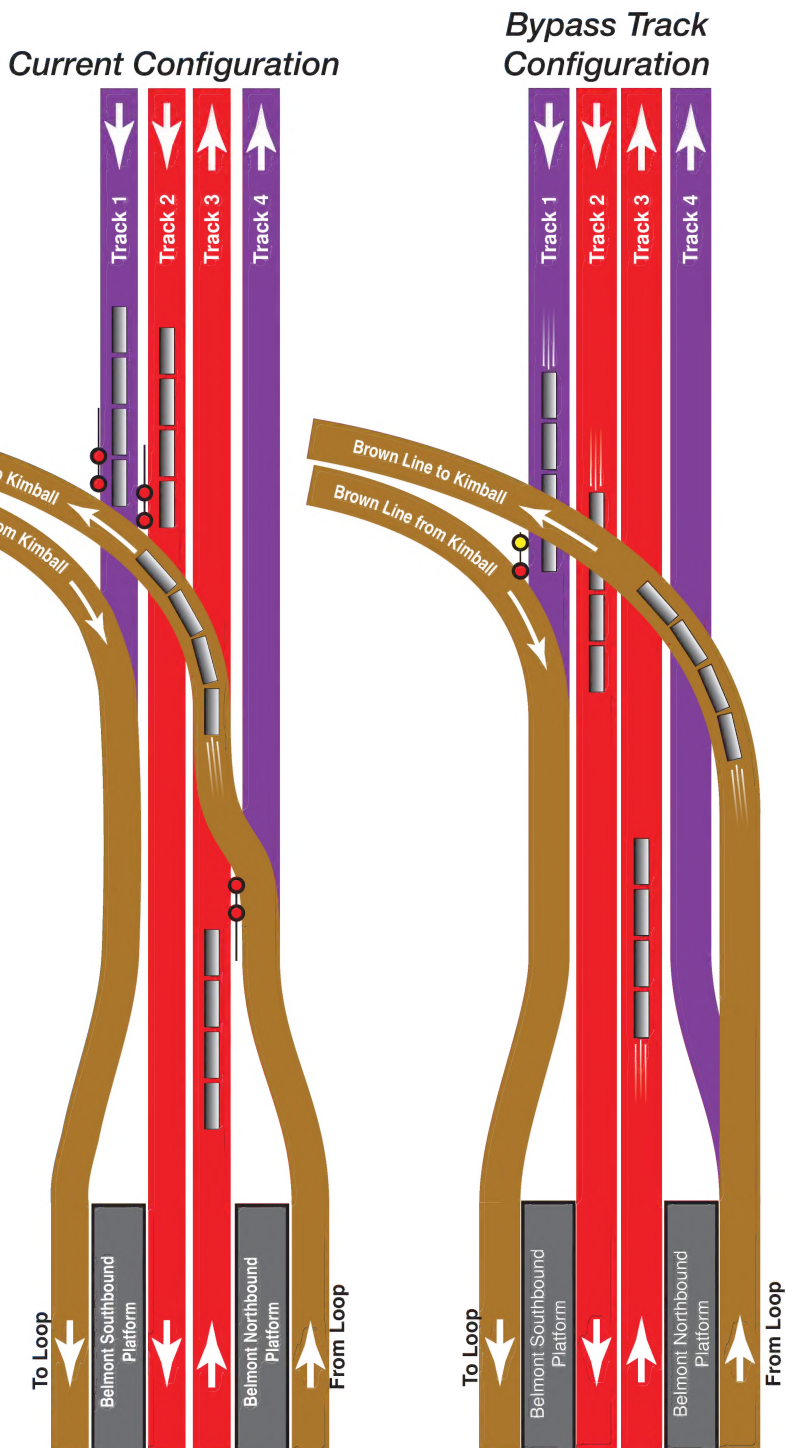
## Red-Purple Bypass Project Overview

### Project Elements

- New fifth track bypass just north of Belmont station
- Reconstruct approximately 0.3 mile of Red and Purple line track from Belmont station to between Newport and Cornelia Avenues

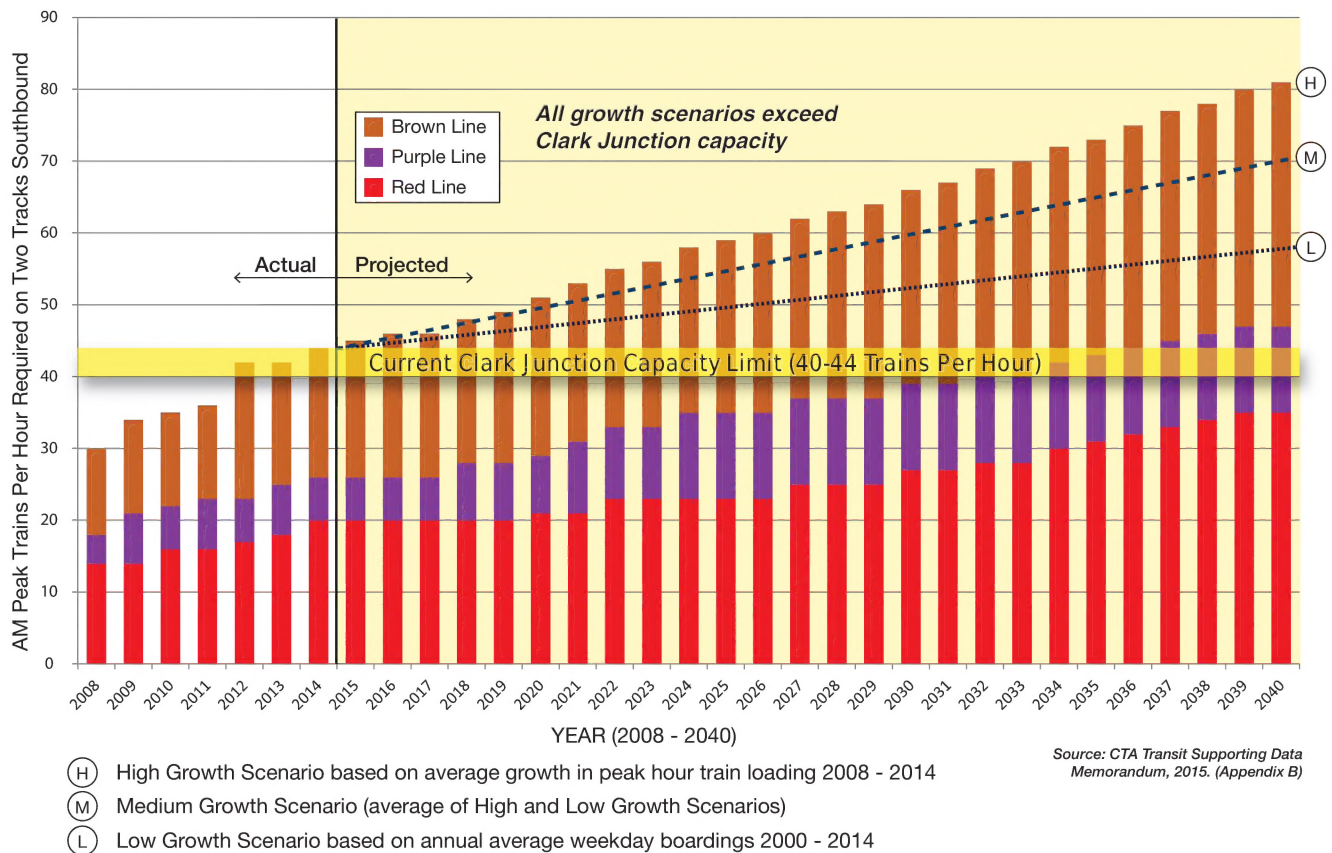
**Anticipated Costs:**  
\$570 million

**Anticipated Construction Start:**  
As early as late 2017



## Capacity Constraints and Growing Demand

Clark Junction is the largest constraint in the RPM corridor, limiting capacity on all three lines that pass through this area.



- Based on 2013 ridership, nearly 145,000 passenger trips through Clark Junction occur every weekday
- The North Red and Purple lines carry more than 24 percent of all CTA train trips
- Peak-period demand has grown by almost 40 percent since 2008
- 185,000 new residents projected to move to areas within ½ mile of Red and Brown line stations by 2040
- Number of trains CTA needs to operate to meet crowding standards in the peak hour is already within the range of maximum capacity at Clark Junction



# Red-Purple Bypass Project

## Purpose and Need

The Environmental Assessment describes the purpose and need for this project and evidence supporting the needs identified.



### Project Purpose

The purpose of the Red-Purple Bypass Project is to improve capacity, travel time, ride quality, and safety in one of CTA's highest ridership corridors. The project would allow CTA to increase functional capacity to meet ridership demands while maintaining or improving the quality, speed, and passenger comfort.

### Needs to be Addressed

- A substantial number of transit customers rely on the existing train line
- Peak ridership demand exceeds existing infrastructure capacity
- Passenger crowding is common on trains and delays occur frequently
- Train speeds are reduced due to cross traffic and antiquated infrastructure
- Existing infrastructure is substantially past its useful life
- Maintaining safe operating conditions becomes more difficult and costly as the infrastructure ages and deteriorates

# Alternatives Development Process

**2009 –  
2010**

- Vision study for 9.6-mile RPM corridor
- 4 public meetings, over 300 public comments, over 11,000 mailed surveys

**2011**

- NEPA\* scoping process for 9.6-mile RPM corridor
- 4 public meetings, over 1,500 public comments

**2012**

- Refined alternatives
- Bypass at Clark Junction introduced
- 2 public meetings

**2013**

- Research, concept design to reduce impacts
- FTA and CTA defined a phased approach for the RPM Program

**2014 –  
Present**

- Announced Build Alternative to public
- Public meetings held to gather input on proposed improvements and areas of concern

\*National Environmental Policy Act



# Alternatives Studied and Eliminated

## Underground Tunnel (Subway)

### Major Reasons for Elimination

- Substantially larger project footprint
- Greater impacts on properties and the community
- Longer construction duration and greater costs
- Substantial service disruption during construction
- Would not allow phasing of the RPM Program

## Track 4 Bypass

### Major Reasons for Elimination

- Would not eliminate property impacts
- Introduces a new capacity constraint in the system
- Would not meet purpose and need for the project

## Bypass using Center Tracks

### Major Reasons for Elimination

- Would not eliminate property impacts
- Severe operational impacts during construction
- Bus shuttles would be insufficient to meet passenger needs during construction
- Would not meet the purpose and need for the project

## Stacking Tracks

### Major Reasons for Elimination

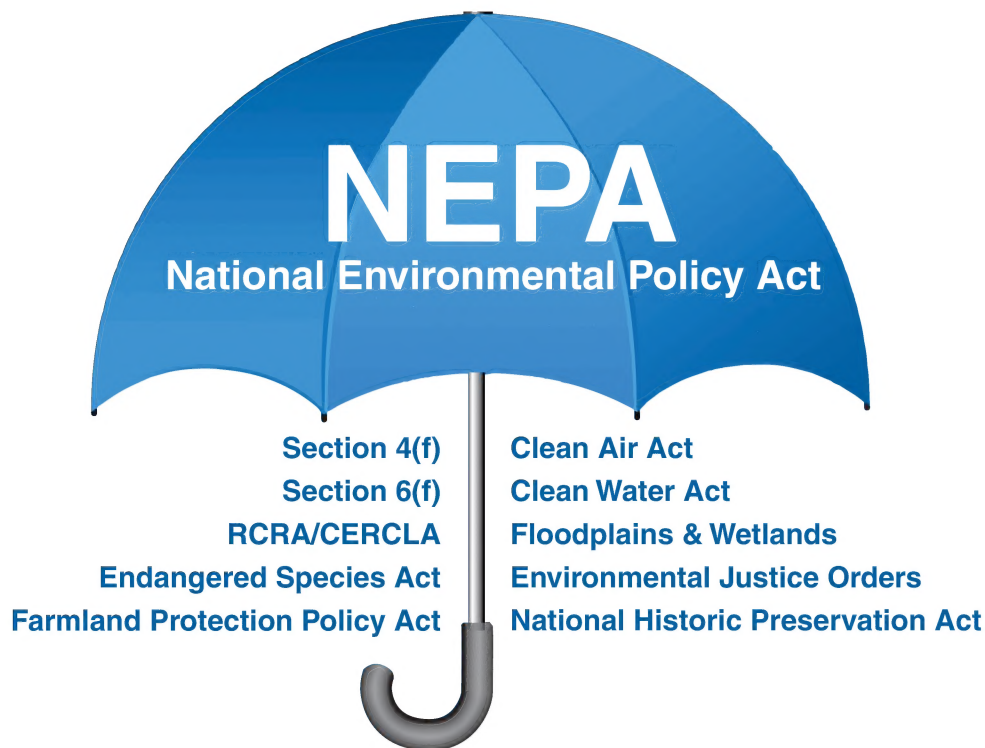
- Longer project length required
- Wider right-of-way required
- Would result in greater property impacts
- Substantial operational issues
- Visual impact of double-stacked structure



# Purpose and Status of the Environmental Assessment (EA)

## EA Purpose

The National Environmental Policy Act (NEPA) looks at a broad range of community and environmental impacts. It is required for all federally funded projects.



## EA Status

Red-Purple Bypass Project was published and made available for public review and comment on May 19, 2015.

- Comments and responses received on environmental impacts will be incorporated into the final decision document
- FTA will issue a finding on the proposed project based on the significance of impacts identified
- The finding will guide future planning and implementation of the project

# Alternatives Considered

This Environmental Assessment compares the No Build Alternative and Build Alternative for the Red-Purple Bypass Project.

## No Build Alternative



- Required as part of NEPA environmental analysis
- Includes typical ongoing repairs only and represents future condition if the project were not implemented
- Compares the relative benefits and impacts of the Build Alternative

### Key Characteristics of the No Build Alternative

- Does not expand capacity, or improve service quality or travel times
- Includes funding for emergency repairs at historic levels
- Limited benefits that only provide a short-term extension of structure life

## Build Alternative



- Construction of a fifth track bypass for the northbound Brown Line
- Reconstruction of approximately 0.3 mile of the mainline Red and Purple line tracks from Belmont station on the south to the segment of track between Newport and Cornelia Avenues on the north

### Key Characteristics of the Build Alternative

- Replacement of the existing flat junction with a new fifth track bypass
- Reconstruction of mainline Red and Purple line tracks, removing existing slow curves, and meeting modern design and safety standards
- Installation of a closed-deck, aerial track structure with noise barriers to minimize noise impacts
- Would address functional and structural capacity issues in the project area for the next 60 to 80 years



## Fifth Track Bypass



*Current view of junction north of Belmont*



*Conceptual rendering of the junction north of Belmont*

**Fifth Track Bypass:** Build a grade-separated junction allowing northbound Brown Line trains to cross unimpeded over the other tracks on a new aerial structure, resulting in increased capacity for all three lines while also improving travel time and overall system reliability and safety.

### Key Benefits

- Removes the largest physical constraint (flat junction) in the RPM corridor
- Allows CTA to increase peak service on the Red Line by up to 30%
- Allows CTA to add up to 8 more trains per hour during rush hour on the Red Line alone
- Additional capacity would allow CTA to accommodate up to 7,200 more passengers per hour

### Key Impacts

- Additional right-of-way required to accommodate new bypass

### How the Build Alternative Reduces Impacts

- CTA conducted detailed surveys which identified properties that provide enough space for construction, as well as right-of-way



## Mainline Tracks



Schematic - Not to Scale

**Mainline Tracks:** Modernize existing open-deck mainline structure from Belmont station on the south to the stretch of track between Newport and Cornelia Avenues on the north.

### Key Benefits

- Removes existing speed-restrictive curves to improve speed and ride quality
- Meets all modern design standards and improves safety
- Minimizes noise and vibration impacts by using a closed-deck structure with welded rail and noise barriers
- Together with the new bypass, straightening the curves would save passengers more than ½ million hours in travel time annually

### Key Impacts

- Additional right-of-way would be required to meet modern track spacing requirements and straighten slow curves

### How the Build Alternative Reduces Impacts

- Construction would cause limited disruptions to transit service
- A closed-deck structure with noise barriers on both sides of the track deck would reduce noise transmission at and below track level

## How the Project Would Be Constructed



Construction is proposed to occur in three stages. Total construction duration is anticipated to take 48 to 52 months, and early work could begin as early as late 2017.

Stage	Work Type	Passenger Impacts
1	<b>Early Work</b>	None anticipated.
2	<b>Bypass Construction</b>	Weekend and/or off-peak service impacts. On a select number of weekends, a bus shuttle service (Belmont to Southport stations) would replace Brown Line service.
3	<b>Mainline Track Construction</b>	Two-track operation of Red and Purple lines. On a select number of weekends, a bus shuttle service (Belmont to Addison stations) would replace Red Line service.



# Transportation Impacts and Mitigation

CTA is committed to a number of mitigation measures to minimize impacts to service and the surrounding community during construction.



## Construction Mitigation Measures

- **Minimizing Service Disruptions:** Construction-related service disruptions scheduled to occur during weekends and/or off-peak periods.
- **Road Closures/Detours:** Will maintain continued traffic access and routing. Detailed Maintenance of Traffic and Access Plans will be developed.
- **Outreach and Notifications:** Advance notice to transit passengers, neighboring property owners, residents, and businesses. CTA will develop a Construction Outreach and Coordination Plan with the community.
- **Off Street Parking:** Contractor will provide designated off-street parking areas for workers to maintain on-street parking.



## Permanent Property Displacements



### Legend

#### Proposed Track Alignment

- Brown Line Tracks
- Purple Line Tracks
- Red Line Tracks

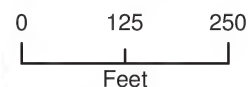
#### Existing Track Alignment

- Brown Line Tracks
- Purple Line Tracks
- Red Line Tracks

- Existing Platform
- Building Displacement
- Land Area Displacement
- AirRights

### Scale

1 inch = 250 feet



RPB Displacements

# Permanent Property Displacements

Displaced owners will be compensated and provided relocation assistance per the federal Uniform Act.

## Compensation for Property Owners

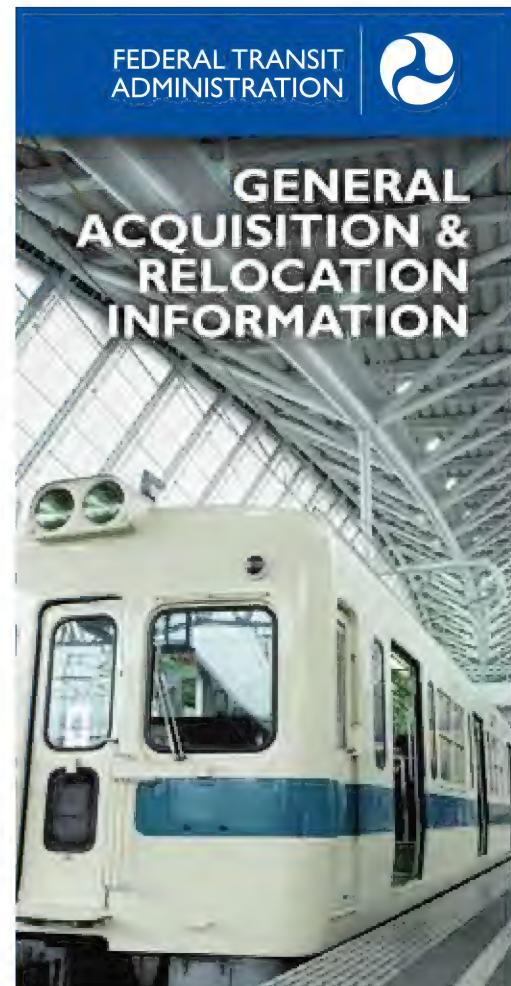


- Payment will be no less than fair market value for the owners' land and buildings
- Owners may be eligible for compensation equal to the original purchase price of the property

## Owner and Tenant Relocation



- Compensation will be provided for the cost of moving your business or residence





## Community and Business Impacts

While the permanent result of these improvements is expected to be largely beneficial to the surrounding community, construction could have impacts to the community and particularly surrounding local businesses.

CTA proposes to develop a **Construction Outreach and Coordination Plan** in collaboration with aldermanic offices and surrounding community stakeholders to promote and assist local businesses and residences affected by construction.

### Proposed Elements of the Construction Outreach and Coordination Plan

- Community Input Meetings
- Task Force Development
- Dedicated Webpage
- Construction Updates and Notifications
- CTA Business Outreach Program



Example of webpage outreach used during Red-Purple Bypass Public Outreach Meeting, Spring 2014 the CTA Brown Line Expansion Project



# Community and Business Impacts Neighborhood Redevelopment Plan

While the permanent result of these improvements is expected to be largely beneficial to the surrounding community, construction could have impacts to the community.

Prior to construction, CTA will work with the City, Ward 44 alderman's office, chambers of commerce, and the surrounding community to develop a plan for redevelopment after construction.



*Conceptual Rendering of Clark Street looking north toward Roscoe (Rendering depicts potential redevelopment)*



*Conceptual rendering of Wilton Avenue looking northwest near Belmont station (Rendering depicts potential redevelopment)*

## Proposed Elements of the Neighborhood Redevelopment Plan



- Identify development opportunities that fit within neighborhood context for excess property remaining after construction
- Outline incentives to encourage redevelopment and minimize duration of vacant properties and parcels following construction

# Visual and Aesthetic Changes

The major visual and aesthetic changes proposed as part of the Red-Purple Bypass Project include the following:



*Photo and Artistic Conceptual Rendering of Proposed Red-Purple Bypass, Facing North from Belmont Station*

**Fifth Track Bypass** – Brown Line track would cross over the Red and Purple line tracks, clearing the tracks by approximately 22 feet at its highest point. At its highest point, the structure would be approximately 40 to 45 feet in height.

**Modern, Closed-Deck Structure and Noise Barriers** – The proposed modern structure would have a closed deck, with noise barriers (approximately 3 to 5 feet high) on both sides of the track deck. The existing support structure (which uses riveted steel) would be replaced by a modern concrete or steel structure.

**Property Displacements** – Property displacements would be required to accommodate the bypass, modernized mainline track structure, and construction. After construction, the remaining excess property will become available for potential redevelopment.



## Visual and Aesthetic Changes

Photo and Artistic  
Conceptual Rendering  
of Proposed Red-Purple  
Bypass with and without  
Redevelopment at Clark  
Street and Buckingham  
Place, Facing Northwest

*Existing Conditions*



*Build Alternative  
(without redevelopment)*



*Build Alternative  
(with redevelopment)*





## Visual and Aesthetic Changes

Photo and Artistic  
Conceptual Rendering  
of Proposed Red-  
Purple Bypass with and  
without Redevelopment  
at School Street and  
Wilton Avenue, Facing  
Southwest

*Existing Conditions*



*Build Alternative  
(without redevelopment)*



*Build Alternative  
(with redevelopment)*



## Visual and Aesthetic Changes

Photo and Artistic  
Conceptual Rendering  
of Proposed Red-Purple  
Bypass with and without  
Redevelopment at Clark  
Street and Newport  
Avenue, Facing South



*Existing Conditions*

*Build Alternative  
(with Vautravers Building  
moved and without  
redevelopment)*



*Build Alternative  
(with Vautravers  
Building moved and  
redevelopment)*





# Noise and Vibration Impacts

Several noise- and vibration-reducing features are proposed as part of the Build Alternative, including a closed-deck structure, using welded rail, and installation of noise barriers.



*Closed Deck, Welded Rail with Noise Barriers*

## Noise and Vibration Impacts



- 70% of noise-sensitive areas near the Red-Purple Bypass would have **reduced noise levels**
- At 6 of the 56 noise-sensitive receiver clusters identified, moderate or severe noise impacts and vibration increases were predicted due to trackwork (crossovers) or building demolition **prior to mitigation**

## Noise and Vibration Mitigation



- Design and construction mitigation measures will reduce noise and vibration levels to below FTA thresholds
  - Could include design measures such as low-impact frogs, rail dampers, rubber bearing pads, and other measures
  - Additional mitigation could include special track designs at crossovers or other measures to reduce noise levels
- CTA will require the contractor to reduce construction noise and vibration with alternate operational scheduling, equipment choice, acoustical treatments, and by following best management practices

## Historic Resources

The elevated track structure is individually eligible for the National Register of Historic Places (NRHP) and would experience an adverse effect from implementation of this project. Implementation of the project would also result in adverse effects on one building and one National Register Historic District.



**CTA Elevated Track Structure**



**Vautravers Building**  
947-949 W. Newport Avenue



**Newport Avenue Historic District**

### Measures to Resolve Adverse Effects on Historic Resources



Over the last year, FTA and CTA, in consultation with the Illinois Historic Preservation Agency and consulting parties, developed a series of measures to resolve the adverse effects, including the following:

- CTA's preferred option is to move the Vautravers Building approximately 29 feet to the west of the existing location
- If not feasible to move the Vautravers Building, CTA will preserve key architectural features of the building
- Develop and install an interpretive display conveying the history and significance of the north Red and Purple lines
- Update historic documentation for the Newport Avenue Historic District
- Prior to any demolition of historic resources, CTA will prepare appropriate historic record documentation



# Project Funding Overview

## Capital Investment Grant (CIG) Program

- CTA intends to pursue funding from FTA for the Red-Purple Bypass Project. The CIG program involves a multiyear, multistep process that project sponsors must complete before a project is eligible for funding.

## Federal, State, and Local Funds

- Federal funding could pay for a substantial portion of project costs, however state and local funds would still be needed to pay for more than half of project costs.
- CTA is continuing to work with federal, state, and local agencies and elected officials to secure the necessary funding to keep this project moving forward with the support of the community.

## Cost Saving Strategies

- CTA is also looking at cost-saving strategies through alternative construction and financing methods.

# Thank you for participating!

## Stay Involved



### Next Steps

- CTA and FTA will respond to public comments on the EA.
- FTA will issue a NEPA Decision Document summarizing results of the EA including all comments and responses.
- CTA will complete preliminary engineering in fall 2015.
- CTA will apply to FTA to start the next phase of the Capital Investment Grant funding program (Engineering).
- Once FTA's NEPA decision is made, engineering is complete, and funding is secured, CTA will begin construction of this project. Contingent on these factors, construction could begin as early as late 2017.